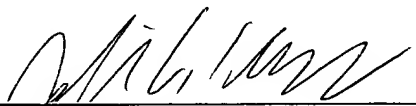




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| TRANSMITTAL OF APPEAL BRIEF | | | Docket No. 32011-164584 | |
|---|------------------------------|--------------------------|----------------------------|--|
| In re Application of: Kawakami et al. | | | | |
| Application No. 09/603,622 | Filing Date June 26, 2000 | Examiner Q. N. Nguyen | Group Art Unit 2141 | |
| Invention: DATA COMMUNICATION SYSTEM | | | | |
| <u>TO THE COMMISSIONER OF PATENTS:</u> | | | | |
| Transmitted herewith is the Appeal Brief in this application, with respect to the Notice of Appeal filed: <u>December 8, 2004</u> . | | | | |
| The fee for filing this Appeal Brief is <u>\$ 500.00</u> . | | | | |
| <input checked="" type="checkbox"/> Large Entity <input type="checkbox"/> Small Entity | | | | |
| <input type="checkbox"/> A petition for extension of time is also enclosed. | | | | |
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| This sheet is submitted in duplicate. | | | | |
|  Jeff A. Kaminski Attorney Reg. No. : 42,709 VENABLE LLP P.O. Box 34385 Washington, DC 20043-9998 (202) 344-4000 | | | Dated: <u>1-28-05</u> | |



PTO/SB/17 (12-04v2)

Approved for use through 7/31/2006. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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| | | | |
|---|--------------------|--------------------------|-------------------|
| Effective on 12/08/2004. Fees pursuant to the Consolidated Appropriations Act, 2005 (H.R. 4818). FEE TRANSMITTAL For FY 2005 | | Complete if Known | |
| | | Application Number | 09/603,622 |
| | | Filing Date | June 26, 2000 |
| | | First Named Inventor | Eiichiro Kawakami |
| | | Examiner Name | Q. N. Nguyen |
| <input type="checkbox"/> Applicant claims small entity status. See 37 CFR 1.27 | Art Unit | 2141 | |
| TOTAL AMOUNT OF PAYMENT | (\$) 500.00 | Attorney Docket No. | 32011-164584 |

| | |
|---|---|
| METHOD OF PAYMENT (check all that apply) | |
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| <input checked="" type="checkbox"/> Deposit Account | Deposit Account Number: 22-0261 Deposit Account Name: Venable LLP |
| For the above-identified deposit account, the Director is hereby authorized to: (check all that apply) | |
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| <input checked="" type="checkbox"/> Charge any additional fee(s) or underpayment of fee(s) under 37 CFR 1.16 and 1.17 | <input checked="" type="checkbox"/> Credit any overpayments |

| | | | | | | | |
|---|---------------------|---|----------------------|----------------------------------|-------------------------|------------------------------|-----------------------|
| FEE CALCULATION | | | | | | | |
| 1. BASIC FILING, SEARCH, AND EXAMINATION FEES | | | | | | | |
| | FILING FEES | | SEARCH FEES | | EXAMINATION FEES | | |
| Application Type | Fee (\$) | Small Entity Fee (\$) | Fee (\$) | Small Entity Fee (\$) | Fee (\$) | Small Entity Fee (\$) | Fees Paid (\$) |
| Utility | 300 | 150 | 500 | 250 | 200 | 100 | |
| Design | 200 | 100 | 100 | 50 | 130 | 65 | |
| Plant | 200 | 100 | 300 | 150 | 160 | 80 | |
| Reissue | 300 | 150 | 500 | 250 | 600 | 300 | |
| Provisional | 200 | 100 | 0 | 0 | 0 | 0 | |
| 2. EXCESS CLAIM FEES | | | | | | | |
| | | | | | | Small Entity | |
| Fee Description | | | | | | Fee (\$) | Fee (\$) |
| Each claim over 20 (including Reissues) | | | | | | 50 | 25 |
| Each independent claim over 3 (including Reissues) | | | | | | 200 | 100 |
| Multiple dependent claims | | | | | | 360 | 180 |
| Total Claims | Extra Claims | Fee (\$) | Fee Paid (\$) | Multiple Dependent Claims | | | |
| _____ | - = _____ | x _____ | = _____ | Fee (\$) | Fee Paid (\$) | | |
| Indep. Claims | Extra Claims | Fee (\$) | Fee Paid (\$) | | | | |
| _____ | - = _____ | x _____ | = _____ | | | | |
| 3. APPLICATION SIZE FEE | | | | | | | |
| If the specification and drawings exceed 100 sheets of paper (excluding electronically filed sequence or computer listings under 37 CFR 1.52(e)), the application size fee due is \$250 (\$125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s). | | | | | | | |
| Total Sheets | Extra Sheets | Number of each additional 50 or fraction thereof | Fee (\$) | Fee Paid (\$) | | | |
| _____ | - 100 = _____ | /50 _____ (round up to a whole number) x _____ | = _____ | | | | |
| 4. OTHER FEE(S) | | | | | | | |
| Non-English Specification, \$130 fee (no small entity discount) | | | | | | | |
| Other (e.g., late filing surcharge): 1402 Filing a brief in support of an appeal | | | | | | | 500.00 |

| | | | |
|---------------------|--------------------|-----------------------------------|----------------|
| SUBMITTED BY | | | |
| Signature | | Registration No. (Attorney/Agent) | 42,709 |
| Name (Print/Type) | Jeffri A. Kaminski | Telephone | (202) 344-4000 |
| | | Date | 1-28-05 |



Docket No.: 32011-164584
(PATENT)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:
Kawakami et al.

Application No.: 09/603,622

Confirmation No.: 3193

Filed: June 26, 2000

Art Unit: 2141

For: DATA COMMUNICATION SYSTEM

Examiner: Q. N. Nguyen

APPEAL BRIEF

MS Appeal Brief - Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

As required under § 41.37(a), this brief is filed within two months of the Notice of Appeal filed in this case on December 8, 2004, and is in furtherance of said Notice of Appeal.

The fees required under § 41.20(b)(2), and any required petition for extension of time for filing this brief and fees therefore, are dealt with in the accompanying TRANSMITTAL OF APPEAL BRIEF.

This brief contains items under the following headings as required by 37 C.F.R. § 41.37 and M.P.E.P. § 1206:

- | | |
|------|---|
| I. | Real Party In Interest |
| II | Related Appeals and Interferences |
| III. | Status of Claims |
| IV. | Status of Amendments |
| V. | Summary of Claimed Subject Matter |
| VI. | Grounds of Rejection to be Reviewed on Appeal |

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| | |
|------------|---------------------|
| VII. | Argument |
| VIII. | Claims |
| IX. | Evidence |
| X. | Related Proceedings |
| Appendix A | Claims |

I. REAL PARTY IN INTEREST

The real party in interest for this appeal is:

Oki Electric Industry, Co., Ltd.
7-12, Toranomom, 1-chome
Minato-ku, Tokyo, Japan

II. RELATED APPEALS, INTERFERENCES, AND JUDICIAL PROCEEDINGS

There are no other appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in this appeal.

III. STATUS OF CLAIMS

The Application as filed included claims 1-13.

Claims 12 and 13 have been canceled. Claims 1-11 have finally rejected in the Office Action of September 8, 2004. Claims 1-11 are being appealed.

IV. STATUS OF AMENDMENTS

In response to the Final Office Action of September 8, 2004, a Notice of Appeal was filed on November 29, 2004. No amendments were filed subsequent to the issuance of the Final Office Action.

V. SUMMARY OF CLAIMED SUBJECT MATTER

The present invention provides a data communication system for broadcast communications from a main station to a number of substations. The present invention provides numerous

advantages over known data communications systems. Advantages of the invention are described in the specification at page 2 among other locations. Advantages of the present invention include improving data communication efficiency and shorting the time for confirming whether a transmission is normal.

These and other advantages are achievable with the present invention as recited, for example, in independent claim 1. As recited in independent claim 1, the present invention provides a data communication system. The data communication system includes a main station 101 and plural substations 102, 103, 104, each of which is connected to the main station 101 by a common transmission line 105. A data transmitter provided in the main station 101 transmits data D1 addressed to all of the plural substations 102, 103, 104. Plural data receivers are provided in the plural substations 102, 103, 104 respectively to receive the data D1. (See page 3, line 21-26 and page 4, line 25 to page 5, line 2 and Figures 1 and 2). The main station 101 transmits a query message PA1 to all of the substations 102, 103, 104 after the data D1 are transmitted. The query message PA1 inquires whether the reception of the data D1 was normal (please see page 3, line 26, page 4, line 11, page 5, lines 3-7 and Figure 2). After receiving data D1, the substations 102-104 determine whether data D1 received normally or abnormally. Each of the substations 102-104 returns a response message when data D1 is received abnormally, but does not return the response message when data is received normally. Response transmitters provided in the substations 102-104 transmit a carrier as the response message. (Please see page 5, lines 10-13 and page 4, lines 9-18 and Figure 2). As such, the response message is a mere carrier, that is, a sine wave which is not modulated. Therefore, the carrier contains no transmission signal. After transmitting the query message PA1, the main station judges the signal wave the carrier transmitted from the one or more of the plural substations 102-104. The main station 101 may effect carrier sensing as the judging. (Please see page 5, lines 8-10). Carrier sensing is a technology for detecting whether an other device is using the common transmission line 105, so carrier sensing does not decipher any transmission signal in the carrier. When the main station 101 does not detect the carrier during the carrier sensing, the main station 101 transmits the next transmission data. (Please see timing 13 of Figure 2). When the main station 101 detects the carrier transmitted from one or more of the plural

substations 102-104, the data D1 is retransmitted addressed to all the plural substations 102-104. (Please see timing 15 of Figure 2). As a result, the main station 101 only has to effect carrier sensing and does not need to decipher any transmission signal transmitted by the carrier when judging whether the data D1 is received normally or abnormally.

VI. GROUNDS OF OBJECTION TO BE REVIEWED ON APPEAL

(1) Whether the Examiner has established that claims 1-8 and 10-11 are obvious over U.S. Patent Number 6,404,739 to Gonno in view of the StarBurst Multicast File Transfer Protocol (MFTP) Specification by Miller et al.

(2) Whether the Examiner has established that claim 9 is obvious over the combination of Gonno and Miller et al. further in view of U.S. Patent Number 5,473,608 to Gagne et al.

VII. ARGUMENT

A. The rejection over Gonno in view of the Miller et al.

(A1) Claims 1-3, 10 and 11

As described above and recited in claim 1, a data communication system according to an embodiment of the invention includes response transmitters provided in each of the plural substations 102-104. The response transmitters transmit a carrier as a response message to the query message PA1. The carrier is the response message. Based on the presence or absence of the response message, the main station 101 can judge whether data D1 was received normally or abnormally. The response message transmitted from the response transmitter is a mere carrier, that is, a sine wave that is not modulated. As such, the carrier contains no transmission signal. Claim 1 also recites that the main station 101 judges when one or more of the substations 102-104 has transmitted a carrier whenever a certain signal wave is received. When the carrier wave is judged to be received, data D1 is retransmitted to all of the substations 102-104. The main station only judges that one or more of the substations 102-104 transmitted response messages, without analyzing the received signal wave. Therefore, the main station 101 does not need to judge whether the received

signal wave contains a message that indicates failure of a data reception at a substation 102-104 or even whether the received signal wave of the response message is a single carrier or overlapped carriers. When the main station 101 detects no signal during a certain time period, the main station 101 transmits the next transmission data. In a preferred embodiment of the present invention described in the specification, a main station 101 detects the signal wave the carrier transmitted from one or more of the substations 102-104 using carrier sensing, which is a technology for detecting whether another device is using a common transmission line. (Please see page 5, lines 8-10 of the specification). The invention has the advantage that the main station can correctly recognize an occurrence of a data transmission failure even if the signal of the response message is destructed. For example, the response message may be destructed by a collision of messages or occurrence of noise.

Gonno and Miller et al. do not render the claimed invention obvious as they do not teach or suggest, among other things response transmitters that transmit a carrier as a response message to a query message. Gonno does not teach or suggest a data communication system that uses a mere carrier as a response message. Receivers 33 and 35 of the Gonno system transmit the retransmission request signal NAK for requesting the retransmission of packet B, D and retransmission of packet D, E, respectively, please see column 9, lines 20-24 of Gonno. Accordingly, the retransmission request signal NAK must include information to specify the packet that was not received correctly. Such a transmission request signal can not be achieved by a mere carrier message. Therefore, the retransmission request signal of Gonno is clearly not a carrier as is recited in claim 1. The response message is included in the content of the NAK signal. The Gonno system can not work if a mere carrier is used as the retransmission request signal NAK, that is, the response message of the present invention. Transmitter 1 of Gonno can not recognize an occurrence of a data transmission failure when a signal destruction of the response message is generated, see column 11, lines 11-23 of Gonno.

Miller et al. does not supplement Gonno to teach or suggest the features of independent claim 1 missing from Gonno. In particular, Miller et al. is directed to a multicast file transfer protocol. The disclosure of Miller et al. is directed towards a protocol that provides a reliable means

for transferring files from a sender to up to thousands of multiple receivers simultaneously. There is no disclosure, teaching or suggestion in Miller et al. of a plurality of substations transmitting a carrier as a response message when data is not received normally or of the main station judging the signal wave the carrier transmitted from the substations, and the Examiner does not so assert.

Consequently, it is clear that the combination of Gonno and Miller et al. do not teach, suggest or render obvious the combination of features recited in the rejected claims.

(A2) Claims 4 and 5

Claim 4, from which claim 5 depends, requires that the main station 101 judge that all the plural substations 102-104 successfully received the data D1 when the main station 101 does not receive the carrier within the prescribed period of time. In other words, the main station 101 of the present invention can recognize the success of the data transmission by judging whether the carrier arrives at the main station 101 or not. Accordingly, the main station 101 can correctly recognize the result of the signal transmission even if the signal of the response message is destructed.

On the other hand, the system of Gonno uses a modified carrier as a retransmission request signal NAK, as was described above in respect to claim 1. Moreover, the retransmission request signal NAK, contains information to specify the packet that was not able to be received correctly. Thus, the transmitter of Gonno's system needs to decipher whether the received signal is a NAK or not. Therefore, a carrier is not the response message. The transmitter of Gonno's system can not correctly recognize the result of the data transmission if the signal and the response message is destructed.

As described above, Miller et al. does not supplement Gonno to teach or suggest this combination of features recited in the rejected claims.

(A3) Claims 6-8

Claim 6, from which claims 7 and 8 depend, recites that the main station 101 judges that one or more substations 102-104 was unable to receive the data D1 normally when the main station 101 receives the carrier within the prescribe period of time. In other words, the main station 101 can recognize the failure of a data transmission only by judging whether the carrier arrives at the main station or not. Thus, the main station can correctly recognize the result of the data transmission even if the signal of the response message is destructed.

In comparison, Gonno's system uses a modified carrier as a retransmission request signal NAK as described above. The retransmission request signal NAK contains information to specify which packet was not able to be correctly received. Thus, the transmitter of Gonno needs to decipher whether the received signal is a NAK or not and which packet is to be retransmitted. Therefore, the transmitter of Gonno system can not recognize the result of a correct transmission if a signal of the response message is destructed.

As described above, Miller et al. does not supplement Gonno to teach or suggest this feature of the present invention. Therefore, it is clear that the combination of Gonno and Miller et al. does not disclose, teach, suggest otherwise render the claimed invention obvious.

B. The rejection of claim 9 over Gonno in view of Miller et al. and further in view of Gagne et al.

Claim 9 depends indirectly from independent claim 1 and is patentable for at least the reason described above regarding independent claim 1. Gagne et al. does not supplement Gonno and Miller et al. to teach or suggest the features of claim 1. Gagne et al. is directed to a data communication method and apparatus that allows communication in a distributed heterogeneous network. Gagne et al. does not teach or suggest response transmitters in the substation which transmit a carrier as a response message to a query message, among other things. Therefore, the combination of Gonno, Miller et al. and Gagne et al. do not teach, suggest or render obvious the claimed invention.

VIII. CLAIMS

A copy of the claims involved in the present appeal is attached hereto as Appendix A.

IX. EVIDENCE

There has been no evidence pursuant to §§ 1.130, 1.131, or 1.132 or other evidence submitted in this application.

X. RELATED PROCEEDINGS

There are no decisions rendered by a court or the board in this application.

Dated: 1-28-05

Respectfully submitted,

By 

Jeff A. Kaminski

Registration No.: 42,709

James R. Burdett

Registration No.: 31,594

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Attorney/Agent For Applicant

APPENDIX A

Claims Involved in the Appeal of Application Serial No. 09/603,622

Claim 1 A data communication system comprising:

 a main station;

 plural substations, each of which is connected to said main station by a common transmission line;

 a data transmitter which transmits data address to all of said plural substations, provided in said main station;

 plural data receivers which receive said data, provided in said plural substations respectively;

 a message transmitter which transmits a query message addressed to all of said plural substations after said data are transmitted, to inquire whether reception was normal, provided in said main station; and

 plural response transmitters which transmit a carrier as a response message to said query message, only when said data could not be received normally, provided in said plural substations respectively;

 wherein, whenever said main station receives a certain signal wave after transmitting said query message, said main station judges the signal wave said carrier transmitted from one or more of said plural substations and retransmits said data addressed to all of said plural substations and wherein when said main station detects no signal during a certain time period, the main station transmits the next transmission data.

Claim 2 The data communication system, according to Claim 1, wherein said main station receives said carrier within a prescribed period of time after the transmission of said query message.

Claim 3 The data communication system, according to Claim 2, wherein said prescribed period of time is the period until the time to start the next transmission of said data.

Claim 4 The data communication system, according to Claim 2, wherein said main station determines that all of said plural substations were able to receive said data normally, when said main station does not receive said carrier within said prescribed period of time.

Claim 5 The data communication system, according to Claim 4, wherein said main station effects the next data transmission when said carrier is not received within said prescribed period of time.

Claim 6 The data communication system, according to Claim 2, wherein said main station determines that any of said plural substations was unable to receive said data normally, when said main station receives said carrier within said prescribed of time.

Claim 7 The data communication system, according to Claim 6, wherein said main station re-transmits said data when said carrier is received within said prescribed period of time.

Claim 8 The data communication system, according to Claim 7, wherein said main station terminates the transmission of said data and effects the transmission of next data when said carrier is received after the same data have been transmitted a prescribed number of times.

Claim 9 The data communication system, according to Claim 8, wherein said main station changes said prescribed number of times.

Claim 10 The data communication system, according to Claim 1, wherein said plural substations, when said normally received data are received once more, delete said data.

Claim 11 The data communication system, according to Claim 1, wherein said plural substations, when said data that could not be normally received are received once more, store said data.